

Reply to: 2510/2620

Date: January 26, 2015

Subject: East Face Vegetation Management and Fuels Project – **Fisheries and Watershed Existing Conditions**

To: Cindy Christensen, Resource Analyst

INTRODUCTION

The following is a summary of the existing condition of instream habitat, water quality, stream flow regimes, and fish populations for the **47,621 acre East Face Vegetation Management and Fuels Project Area** (herein referred to as East Face).

The East Face project area is primarily located in four watersheds and six subwatersheds. The Lower North Powder, Jimmy Creek, Jordan Creek, Tanner Gulch-Grande Ronde River, and Baldy Creek-North Fork John Day subwatersheds have few project acres compared to the size of the subwatershed (see Table 1). The existing condition of these subwatersheds will not be included in this document.

Table 1. Watersheds and subwatershed information for the East Face project.

Watershed Name/Number	Subwatershed Name/Number	SWS Acres (Total)	Project Area Acres	FS Acres	Other (Private, State & BLM)
North Powder River/ 1705020305	Lower North Powder/ 1705020305	16,646	62	62	16,584
	Middle North Powder/ 170502030502	17,394	4,298	12,078	5,316
	Upper Anthony Cr./ 170502030503	14,339	14,292	14,339	0
	Lower Anthony Cr./ 170502030504	12,480	8,575	12,480	0
Powder River-Wolf Creek/ 1705020306	Upper Wolf Creek/ 170502030601	19,470	14,034	14,423	5,047
	Jimmy Creek/ 170502030603	26,721	*165	0	26,721
Ladd Creek/ 1706010406	Upper Ladd Cr./ 170601040601	12,929	2,256	2,355	10,574
Grande Ronde River- Beaver Creek / 1706010403	Upper Beaver Cr./ 170601040301	15,778	3,406	15,454	324
	Jordan Creek/ 170601040303	16,376	0.13	6,044	10,332
Upper Grande Ronde River/ 1706010401	Tanner Gulch-Grande Ronde/ 170601040101	15,245	528	15,245	0
North Fork John Day/ 1707020201	Baldy Creek-North Fork John Day River/170702020101	17,426	6.3	17,097	329

*165 acres=Bureau of Land Management acres

Implementation standards and guidelines from the Wallowa-Whitman National Forest Land and Resource Management Plan (LRMP) including the PACFISH/INFISH amendments, the Wallowa-Whitman National Forest Watershed Management Practices Guide for Achieving Soil and Water Objectives (WMPG), and USDA Forest Service, National Best Management Practices for Water Quality Management on National Forest System Lands, National Core BMP Technical Guide will be considered during the formulation of action alternatives for this project.

Subwatersheds in the North Powder River, Powder River-Wolf Creek, and North Fork John Day Watersheds fall under INFISH, and subwatersheds in the Ladd Creek, Grande Ronde River-Beaver Creek, and Upper Grande Ronde Watersheds fall under PACFISH.

EXISTING CONDITION

Instream Habitat

Region 6 classifies streams based on type of flow and presence or absence of fish. Class I streams are permanently or intermittently flowing and fish bearing, Class II streams are permanently or intermittently flowing and fish bearing with limited numbers of fish, Class III streams are permanently flowing and non-fish bearing, and Class IV streams are intermittently flowing and non-fish bearing. The Class II classification has been dropped, and any fishbearing stream is now identified as Class I. Stream class verification associated with project activities in the south half of the project area were verified in the field during the 2013 and 2014 field seasons. Stream class verification in the north half of the project area was initiated during the 2013 and 2014 field seasons, and will be completed during the 2015 field season. Preliminary results of stream class verification in the project area by subwatershed are shown in Table 2.

The Class I streams (fishbearing) or portions of Class I streams within the project area includes; Antone Creek, North Powder River, Anthony Creek, tributary to Upper Anthony Creek, Webfoot Creek, tributary to Webfoot Creek, North Fork Anthony Creek, Dutch Creek, Wolf Creek, North Fork Wolf Creek, Third Creek, East Fork Clear Creek, West Fork Clear Creek, Upper Beaver Creek, Upper Beaver Creek tributaries, Ladd Creek, and Shaw Creek.

Table 2. Miles of stream class by subwatershed associated with East Face project activities.

Subwatershed Name	Class I Streams (miles)	Class III Streams (miles)	Class IV Streams (miles)
Lower Anthony	6.0	30.1	4.1
Middle North Powder	4.0	14.5	1.1
Tanner Gulch-Grande Ronde River	0	4.1	1.4
Upper Anthony Creek	16.8	53.6	1.8
Upper Beaver Creek	4.4	7.5	5.8
Upper Ladd Creek	2.0	4.4	6.4
Upper Wolf	12.1	34.3	10.3
Total:	45.3	148.5	30.9

Class I = fishbearing, **Class III** = perennial non-fishbearing, **Class IV** = intermittent non-fishbearing

Table 3 shows the results of fish habitat surveys for those streams that have had habitat surveys completed within the project area. This information was obtained from the Region 6 stream survey database and surveys are on file at the La Grande Ranger District. The majority of surveys within the analysis area were completed in 2013 and 2014. One survey, Upper Beaver Creek, was conducted in 1992. Survey information was collected utilizing the Hankin and Reeves methodology as modified by the PNW R6 Regional Office.

Table 3. Results of habitat surveys for fishbearing streams in the East Face project area.

Stream/Year Surveyed	Survey Length (miles)	Pools (#/mile)	Wetted Width (ft)	Stable Banks (%)	W/D Ratio	LWD (pcs/mi)
Antone Creek/2014	4.4	29	8.5	96.4	12.2	65
Anthony Creek/2014	6.9	25	14.6	100	23.6	5
Indian Creek/2014	2.4	47	5.0	100	5.7	49
North Fork Anthony Cr./2014	3.4	59	8.7	99.5	19.3	18
Dutch Creek/2014	1.5	123	4.8	98.2	17.7	17
Wolf Creek/2013	5.8	34	9.3	96	19.8	53
North Fork Wolf Cr./2013	0.8	51	6.9	100	13.5	74
East Fork Clear Creek/ 2014	3.7	95	6.5	95	23.3	47
West Fork Clear Creek/ 2013	1.8	106	4.2	97	13.0	29
Upper Beaver Cr./ 1992	4.3	20	6.1	ND	11.8	13

ND=No Data

PACFISH/INFISH Riparian Management Objectives (RMOs)

Landscape-scale interim RMOs describing good habitat for anadromous fish were developed using stream inventory data for pool frequency, large woody debris, bank stability, and width to depth ratio. State water quality standards were used to define favorable water temperatures.

RMOs are as follows:

Pool Frequency: (varies by wetted width)

Wetted width in feet:	10	20	25	50	75	100	125	150
Number of pools per mile:	96	56	47	26	23	18	14	12

Water Temperature: Compliance with state water quality standards, or maximum <68F

Large Woody debris: > 20 pieces per mile; >12 inches diameter; 35 foot length

Bank Stability: >90 percent stable

Width/Depth Ratio: <10, mean wetted width divided by mean depth

Pool Frequency

Seven out of the 10 streams surveyed were below the RMO for pools/mile at the time of the survey (Table 3).

Dutch Creek and the West Fork of Clear Creek both exceeded the RMO for pools per mile with 123 and 106 pools per mile. The East Fork of Clear Creek came very close to meeting the RMO with 95 pools per mile.

Water Temperature

There are nine stream temperature monitoring sites in the project area. See Table 4 for below for sites and monitoring results.

Table 4. Results of stream temperature monitoring in the East Face project area.

Location	Maximum Weekly Average Temperature (F°)	
	2013	2014
Anthony Creek Upstream of N. Fk. Anthony Confluence	61.4	61.5
Anthony Creek Upstream of Indian Creek Confluence	59.1	58.3
Indian Creek Near Mouth	56.5	56.7
North Fork Anthony Upstream of Anthony Creek Confluence	56.9	58.8
Upper Wolf Creek Upstream of Elkhorn Creek	59.1	59.5
North Fork Wolf Creek Below Falls	63.5	62.8
East Fork Clear Creek	65.2	66.9
West Fork Clear Creek	61.8	63.0

NP=Not placed during that year

*=Error in data resulting in unusable information (i.e. equipment failure, program malfunction, lost or stolen)

The Oregon Department of Environmental Quality (ODEQ) state water quality standard is based on the maximum 7-day running average. Temperature standards were developed based on temperature requirements of salmonids during different seasons and life stages. There are four standards applicable to streams within the East Face project area. These are: native Oregon bull trout spawning and rearing use where water bodies must not be warmer than 53.6°F; redband trout use where water bodies must not be warmer than 68.0°F; core cold water habitat use where water bodies must not be warmer than 60.8°F; salmon and trout rearing and migration use where water bodies must not be warmer than 64.4°F. Temperature standards for streams in the East Face project area are shown below in Table 5.

Table 5. ODEQ temperature standards for streams in the East Face project area.

Fishbearing Streams in Project Area of Subwatershed	Temperature Standard Water Bodies Must Not Be Warmer Than: (Maximum Weekly Average Temperature)
Anthony Cr. & tribs upstream of confluence with N. Fk. Anthony	53.6°F- for native Oregon bull trout
Webfoot Creek & tributary	53.6°F- for native Oregon bull trout
Indian Creek	53.6°F- for native Oregon bull trout
North Fork Anthony Creek	53.6°F- for native Oregon bull trout
Wolf Creek	53.6°F- for native Oregon bull trout
North Fork Wolf Creek	53.6°F- for native Oregon bull trout
Third Creek	53.6°F- for native Oregon bull trout
Antone Creek	68.0°F-for redband trout
Anthony Cr. downstream of confluence with N. Fk. Anthony	68.0°F-for redband trout
Dutch Creek	68.0°F-for redband trout
East Fork Clear Creek	68.0°F-for redband trout
West Fork Clear Creek	68.0°F-for redband trout
North Powder River in project area	68.0°F-for redband trout
Ladd Creek	64.4°F-for salmon & trout rearing & migration
Shaw Creek	64.4°F-for salmon & trout rearing & migration
Upper Beaver Creek & tribs.	60.8°F- for core cold water habitat use

The following streams listed in Table 4 did not meet the state water quality standard for native Oregon bull trout spawning and rearing use where water bodies must not be warmer than 53.6°F. Temperature standards by stream are shown in Table 5.

- Anthony Creek Upstream of North Fork Confluence
- Anthony Creek Upstream of Indian Creek Confluence
- Indian Creek
- North Fork Anthony Creek
- Wolf Creek
- North Fork Wolf Creek

Two streams listed in Table 4 met the state water quality standard for redband trout use where water bodies must not be warmer than 68.0°F.

Bank Stability

Nine of the 10 streams listed in Table 3 met the RMO for streambank stability of >90%. No streambank stability data is available for one stream surveyed in 1992, Upper Beaver Creek.

Width to Depth Ratio

One of the streams surveyed within the project area, Indian Creek, met the INFISH width to depth ratio of <10 (Table 3). The remaining streams have width to depth ratios within the expected range of Rosgen stream types (Rosgen, 1996). Table 6 below compares width to depth ratios with expected width to depth ratios described for Rosgen stream types. Wolf Creek consists of three Rosgen stream types, B1, B3, and C4.

Table 6. Width to depth ratio for streams surveyed within the project area, and width to depth ratios described for Rosgen stream types.

Rosgen Channel Type	General Rosgen Width to Depth	Average Rosgen Width to Depth For Channel Type	Range Rosgen Width to Depth Ratio	Stream Name	Width To Depth Ratio
B1	>12	None Given	None Given	North Fork Wolf Creek Portion of Wolf Creek	13.5 19.8
B2	>12	20.4	12.0 to 39.0	Antone Creek Anthony Creek North Fork Anthony	12.2 23.6 19.3
B3	>12	18.8	11.7 to 38.0	Portion of Wolf Creek East Fork Clear Creek	19.8 23.3
B4	>12	16.6	10.7 to 36.7	Dutch Creek West Fork Clear Creek Upper Beaver Creek	17.7 13.0 11.8
C4	>12	29.3	13.5 to 75.0	Upper Wolf Creek	19.8

Note: Wolf Creek consists of B1, B3, and C4 Rosgen stream types.

Large Woody Debris (LWD)

Anthony Creek, North Fork Anthony Creek, Dutch Creek, and Upper Beaver Creek did not meet the standard of > 20 pieces of large wood per mile. Antone Creek, Indian Creek, Wolf Creek, North Fork Wolf Creek, East Fork Clear Creek, and West Fork Clear Creek exceeded the standard of > 20 pieces of large wood per mile (Table 3).

Water Quality

Stream Temperature

The ODEQ state water quality standards for temperature are based on the maximum 7-day running average. Temperature standards were developed based on temperature requirements of salmonids during different seasons and life stages. There are four temperature standards applicable to streams within the East Face project area (Table 5).

Oregon Department of Environmental Quality (ODEQ) TMDL and 303 (d) Listed Streams

Upper Grande Ronde River Subbasin (Upper Beaver Creek, Upper Ladd and Tanner Gulch-Grande Ronde River Subwatersheds)

A TMDL Water Quality Management Plan (WQMP) has been developed for the Upper Grande Ronde Subbasin, and was approved By EPA in May of 2000. With the approval of a TMDL the ODEQ 303 (d) list no longer applies. Once the TMDL is developed and approved all management activities on federal lands managed by the USDA Forest Service will continue to follow standards and guidelines (S&Gs) as listed in PACFISH, the Wallowa-Whitman N.F. Forest Plan, Best Management Practices (BMPs) as defined in the Implementation Plan for 208 (Water Pollution Control Act, PL 92-500, as amended) and USDA Forest Service, National Best Management Practices for Water Quality Management on National Forest System Lands, National Core BMP Technical Guide. Additionally, specific SMU Constraints and Mitigation Measures are identified in the Wallowa-Whitman Watershed Management Handbook, which is used when various situations are encountered during project layout.

Powder River Subbasin (Upper North Powder, Middle North Powder, Upper Anthony Creek, Lower Anthony Creek, and Upper Wolf Creek Subwatersheds)

The ODEQ assigns specific standards for water quality parameters based on beneficial uses. Water bodies that do not meet State standards are generally listed as water quality-limited streams under section 303(d) of the Clean Water Act. There are two streams within the East Face project area that are listed under section 303(d). These are Indian Creek and Anthony Creek. Both are listed for temperature. The 303(d) portion of Anthony Creek spans two subwatersheds (Upper and Lower Anthony Creek), and Indian Creek is within the Upper Anthony Creek subwatershed. See Table 7 below.

Table 7. ODEQ 303(d) listed streams in the East Face project area.

Stream	Subwatershed(s)	River Mile	Water Quality Limited For:
Anthony Creek	Upper and Lower Anthony Creek	0 to 16.0	Temperature
Indian Creek	Upper Anthony	0 to 5.2	Temperature

A TMDL Water Quality Management Plan (WQMP) is in the process of being developed for the Powder Basin. Once the TMDL is developed and approved all management activities on federal lands managed by the USDA Forest Service in the Powder Basin will continue to follow standards and guidelines (S&Gs) as listed in the LRMP, as amended by INFISH (USFS 1995), Best Management Practices (BMPs) as defined in various Federal and State laws such as the Implementation Plan for 208 (Water Pollution Control Act, PL 92-500, as amended), USDA Forest Service, National Best Management Practices for Water Quality Management on National Forest System Lands, National Core BMP Technical Guide and Specific Stand Management Unit (SMU) Constraints and Mitigation Measures identified in the Wallowa Whitman NF Watershed Management Handbook.

Beneficial Uses

In Oregon, surface and ground water are publicly owned resources whose use is regulated by the state. In order for a person, business, or agency to use the public water, it must be put to a beneficial use. See Tables 8 and 9 below for the beneficial uses designated by the State of Oregon for the Upper Grande Ronde River and Powder River Basins.

Table 8. Beneficial uses in the Grande Ronde Basin.

Beneficial Uses	Main Stem Grande Ronde (River Mile 39 to 165)	All Other Basin Waters
Public Domestic Water Supply	X	X
Private Domestic Water Supply	X	X
Industrial Water Supply	X	X
Irrigation	X	X
Livestock Watering	X	X
Anadromous Fish Passage	X	X
Salmonid Fish Spawning	X	X
Salmonid Fish Rearing	X	X
Fish and Aquatic Life	X	X
Wildlife & Hunting	X	X
Fishing	X	X
Boating	X	X
Water Contact Recreation	X	X
Aesthetic Quality	X	X
Hydro Power	X	X
Commercial Navigation and Transportation		

Table 9. Beneficial uses in the Powder River Basin.

Beneficial Uses	All Basin Waters
Public Domestic Water Supply	X
Private Domestic Water Supply	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish and Aquatic Life	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	
Commercial Navigation and Transportation	

The beneficial uses potentially affected by timber harvest are salmonid fish spawning and rearing, and resident fish and aquatic life.

Erosion and Sedimentation - Roads provide a substantial source of sediment and a mechanism for delivering sediment to stream systems. The amount varies by density, location and condition of roads. PACFISH and INFISH Standards and Guidelines for existing roads within RHCAs include minimizing sediment delivery to streams from the road surface; closing and stabilizing, or obliterating and stabilizing roads not needed for future management activities; improving stream crossings to accommodate a 100-year flood; and providing and maintaining fish passage at all road crossings of existing and potential fish-bearing streams.

Road Density – Table 10 shows the existing miles of open and closed Forest Service (FS) roads, and total road density of FS roads by subwatershed.

Table 10. Total existing lengths (miles) and densities (miles/square mile) of roads on National Forest in the East Face project area.

Subwatershed Name	National Forest Drainage Area (mi²)	Total FS Open Roads (mi)	Total FS Closed Road (mi)	FS Open and Closed Road Density (mi/mi²)	FS Open Road Density (mi/mi²)
Middle North Powder	18.9	19.1	26.8	2.4	1.0
Upper Anthony Creek	22.4	25.8	41.9	3.0	1.2
Lower Anthony	19.5	17.2	49.7	3.4	0.9
Upper Wolf Creek	22.5	47.6	100.5	6.6	2.1
Upper Ladd Creek	3.7	18.1	6.9	6.8	4.9
Upper Beaver Creek	24.1	38.8	27.8	2.8	1.6

Location of Roads and Trails

There are approximately 73.7 miles of open and closed roads within RHCAs and 430 stream crossings in the project area. This includes Class I (fish bearing), Class III (perennial non-fishbearing), and Class IV streams (intermittent non-fishbearing).

There are 0.3 miles of foot trail and 0.1 miles of horse pack trails within RHCAs in the project area.

Municipal Watersheds

There is no de-facto or designated municipal watersheds in the East Face project area.

Streamflow Regime

Streamflow discharge in the East Face project area is characteristic of a snowmelt hydrograph, with late spring and fall rains contributing to the annual average flows. Stream peak flows in the project area usually occurs in May with flow gradually decreasing to minimum discharge July to August.

The existing Equivalent Clearcut Acres (ECA) calculated for subwatersheds are reported in Table 11. The ECA values do not include adjacent private land harvests. ECA will be used only as an indicator of overall disturbance in the East Face project area, and will not be used to describe hydrologic response.

**Table 11. Percent of forested acres in Equivalent Clearcut Acres (ECA)
For subwatersheds within the East Face project area for the year 2014.**

Subwatershed Name	2014 Existing ECA %
Middle North Powder	1.2
Upper Anthony Creek	1.4
Lower Anthony	2.7
Upper Wolf Creek	3.9
Upper Ladd Creek	5.0
Upper Beaver Creek	1.3

Livestock Grazing

There are two grazing allotments in the East Face project Area. The Indian Crane Allotment is 20,712 acres in size and is vacant. There are no future plans to re-stock the allotment. The Lobo allotment is 15,664 acres in size and is an active cattle allotment. This allotment is primarily in the Upper Wolf Creek subwatershed with a small portion of the allotment in the Lower Anthony Creek subwatershed.

Fish Species and Distribution

There is approximately 48.9 miles of fish bearing stream within the project area. Miles of fishbearing stream include:

- 11.9 miles of Anthony Creek;
- 0.5 miles of Unnamed tributary to Anthony Creek;
- 3.5 miles of Antone Creek;
- 2.1 miles of Beaver Creek;
- 2.3 miles of Unnamed Tributaries to Beaver Creek;
- 1.5 miles of Dutch Creek;
- 3.7 miles of East Fork Clear Creek;
- 1.9 miles of West Fork Clear Creek;
- 2.4 miles of Indian Creek;
- 1.4 miles of Ladd Creek;
- 3.2 miles of North Fork Anthony Creek;
- 0.6 miles of North Fork Wolf Creek;

- 0.5 miles of the North Powder River;
- 0.6 miles of Shaw Creek;
- 0.2 miles of Third Creek;
- 1.9 miles of Webfoot Creek;
- 1.4 miles of Tributary to Webfoot Creek;
- 5.7 miles of Wolf Creek

Salmonid fish species and habitat within the project area include:

- foraging, migration, overwintering, spawning and rearing habitat and designated critical habitat for Columbia River Basin bull trout (*Salvelinus confluentus*), listed as threatened on November 1, 1999;
- spawning and rearing habitat for redband trout (*O. mykiss gibbsi*), which are on the Regional Forester's Sensitive Species List;
- Spawning and rearing habitat for eastern brook trout (*Salvelinus fontinalis*), an introduced species.

A final rule for bull trout critical habitat for the coterminous United States was issued on October 18, 2010. See Table 12 for miles of spawning and rearing habitat, and miles of designated critical habitat for bull trout within the project area by stream.

Table 12. Miles of habitat by salmonid fish species and stream within the East Face project area.

Stream Name	Bull Trout Habitat (Miles)		Redband Habitat (Miles)	Brook Trout (Miles)
	Spawning Rearing	DCH	Spawn Rear	Spawn Rear
Antone Creek	0	0	3.5	3.5
Anthony Creek	5.0	5.0	6.3	11.9
Tributary to Anthony Creek	0	0	0	0.5
Webfoot Creek	0	0	0	1.9
Tributary to Webfoot Creek	0	0	0	1.4
Indian Creek	2.4	2.4	1.2	1.8
North Fork of Anthony Creek	3.2	3.2	1.6	2.4
Dutch Creek	0	0	1.5	1.5
Wolf Creek	1.3	1.3	5.7	0
North Fork Wolf Creek	0	0	0.6	0
Third Creek	0	0	0.2	0
East Fork of Clear Creek	0	0	3.7	0
West Fork of Clear Creek	0	0	1.9	0
Ladd Creek	0	0	1.4	0
Shaw Creek	0	0	0.6	0
Upper Beaver Creek	0	0	2.1	2.1
Tributaries to Upper Beaver Creek	0	0	2.3	2.3
North Powder River	0	0	0.5	0.5
TOTALS	11.9	11.9	33.1	29.8

DCH=designated critical habitat; FMO=foraging, migration, overwintering habitat

Fish Passage Barriers

A fish passage barrier inventory was conducted in the East Face project area during the 2013 and 2014 field seasons. Table 13 below shows the type of barrier, fish species associated with the barrier, and miles of habitat upstream of barrier.

Table 13. Fish passage barriers in the East Face project area.

Stream	Structure Type	Fish Species	Upstream Habitat (miles)
Anthony Creek	Irrigation Diversion (Couganhour)	redband, bull trout, brook trout	1.4 (to Carnes Diversion), 2.0 including Dutch Cr. to ditch)
Anthony Creek	Irrigation Diversion (Carnes)	redband, bull trout, brook trout	10.6
Indian Creek	Culvert 1 (7312 road)	redband, bull trout, brook trout	2.1 (to culvert 2)
Indian Creek	Culvert 2 (7315 035 road)	bull trout	0.3
Antone Creek	Culvert 1 (7300 road)	redband, brook trout	2.1 (to culvert 2)
Antone Creek	Culvert 2 (7300 road)	redband, brook trout	1.5 (to culvert 3)
Antone Creek	Culvert 3 (7300 road)	redband, brook trout	3.5
Dutch Creek	Irrigation Ditch (Carnes)	redband, brook trout	0.3 (to culvert)
Dutch Creek	Culvert (7312 road)	redband, brook trout	0.7
Wolf Creek	Culvert (4316 800 road)	redband, bull trout	5.2
East Fork Clear Cr.	Culvert (4320 road)	redband	1.6
Beaver Creek	Culvert (4300 road)	redband, brook trout	1.1
Beaver Creek Trib.	Culvert (4300 510 road)	redband, brook trout	0.6
Ladd Creek	Culvert 1 (4300 020 road)	redband	0.6 (to culvert 2)
Ladd Creek	Culvert 2 (4300 030 road)	redband	1.0

Stream Diversions

There are two irrigation stream diversions in the project area. The Couganhour and Carnes irrigation diversions are both located on Anthony Creek in the Lower Anthony Creek Subwatershed. The Carnes irrigation diversion is on National Forest and the Couganhour is on land administered by the Bureau of Land Management (BLM). Both irrigation ditches are currently unscreened.

Other Information

Wetlands – Wetlands, seeps and springs not identified during field reconnaissance will be located and protected during the layout process. Most wetlands, seeps and springs in the project area are associated with stream channels.

Specific Project Constraints as Related to Fisheries and Watershed Concerns

This project must be designed in such a way that there will be a very low probability that there will be an adverse effect on fish species in the project area. There must not be a measurable increase in stream sediment delivery in the subwatershed, and efforts should be made to reduce the existing sources of non-natural sediment. Large woody material must not be removed from stream channels. No closed draw bottom roads should be opened for project activities. Existing protection measures should protect other instream habitat needs such as stream cover, bank stability, and water temperature. Implementation guidelines below lists general management measures (Standards and Guidelines) that must be followed for all activities associated with this project.

IMPLEMENTATION GUIDELINES

The Interdisciplinary team should consider the following list of guidelines regarding fisheries and watershed resource values in the planning of the East Face Project:

Riparian Habitat Conservation Areas (RHCAs)

The majority of the project area falls under INFISH (Inland Native Fish Strategy).

INFISH and PACFISH interim RHCAs will be delineated on all streams as follows: 300 feet horizontal distance on all fishbearing streams, 150 feet horizontal distance on non-fishbearing perennial streams and wetlands greater than one acre, and 100 feet horizontal distance on all non-fishbearing intermittent streams and wetlands less than one acre. The interim RHCA widths apply until a Watershed analysis is

completed, a site-specific analysis is conducted and described and the rationale for modification of interim RHCA boundaries is presented, or the interim direction is terminated.

Channel Stability

Maintain natural large wood and trees needed for future recruitment to maintain or restore stream channel and bank structure, maintain or restore water quality, and provide structural fish habitat.

Stream Temperature

Prevent measurable (greater than 0.5 °F change) temperature increases in Class I streams. Temperatures on other streams may be increased only to the extent that water quality standards on downstream, fish bearing streams will still be met.

Sediment Yield

Design the project such that there will not be a net increase in sediment yield from project activities over the life of the project. Reduce non-natural sources of sediment when practical.

Roads

Do not construct roads immediately adjacent to riparian areas. Any planned reconstruction or construction of roads crossing riparian areas will not alter stream or groundwater flow characteristics to the extent that it will impact the riparian area. Locate skid trails and roads to avoid paralleling stream channels in streamside management units. Roads will be managed to minimize impacts to water quality and fish and wildlife habitat. Design and maintain road drainage to prevent the influx of significant amounts of road sediment runoff into streamcourses. No closed draw bottom roads should be opened for access. Reduce road density within the planning area if possible.

Instream Work Permits

Instream work, such as culvert placement or large wood placement in stream channels within jurisdictional waters of the state and US may require a 404 Clean Water Act permit from the Army Corp of Engineers (ACOE) and/or fill/removal permit from the Department of State Lands (DSL). Any instream work will be conducted during the Oregon Department of Fish and Wildlife (ODFW) recommended in stream work window where applicable. Work in Class IV (intermittent non-fishbearing streams should be conducted when streams are dry.

Log landings

Log landings will not be placed in riparian areas unless approved by fish and watershed personnel.

Skidding and Skid Trails

Skidding logs down streamcourses or ephemeral draws will not occur. Locate skid trails to avoid paralleling stream channels.

Prepared By:

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